



Effectiveness of Using Peanut Ball on the Progress of 1st Stage of Child Birth in BPM Palembang City

1st Eprila

Department of Midwifery
Politeknik Kesehatan Kementerian Kesehatan
Palembang, Indonesia
eprila@poltekkeskemenkespalembang.ac.id

3rd Nurul Hidayati

Department of Midwifery
Politeknik Kesehatan Kementerian Kesehatan
Palembang, Indonesia
Nurulhidayati.02.nh@gmail.com

2nd Nur Purnama Sari

Department of Midwifery
Politeknik Kesehatan Kementerian Kesehatan
Palembang, Indonesia
nurpurnamasarinps@gmail.com

4th Nova Dwi Meilati

Department of Midwifery
Politeknik Kesehatan Kementerian Kesehatan
Palembang, Indonesia
novadwimeylati@gmail.com

Corresponding author: eprila@poltekkeskemenkespalembang.ac.id

Abstract - As many as 99% of maternal deaths due to labor or birth problems occur in developing countries. One reason is the length of progress of labor accompanied by pain in uterine contractions. Birth ball is a physical therapy ball that helps mothers in their first year to a position that helps the progress of labor. A physical therapy that helps the progress of labor and can be used in various positions. One of the movements is by sitting on the ball and rocking back and forth. The purpose of this study is to find out the effectiveness of using peanutball on the progress of first-stage labor on maternity at the Palembang City BPM in 2018. Method: The research method used was Quasi Experiment. The population of this study was maternity at 3 BPM in Palembang as many as 30 respondents, namely 15 control respondents and 15 respondents treated with purposive sampling technique. The measuring instruments used are observation and partograph sheets. Test statistical data using an independent T-test. The results of this study indicate that the average length of labor in the treatment group was 3.00. While in the control group is 4.60. The value of p value = 0.003, so based on the Independent T-test Test the value of p value <0.05. So that it can be concluded that the treatment group showed more effective compared to the control group in increasing the progress of labor in multigravida maternity at the first time in the BPM of Palembang City with an average difference of 1 hour faster than the control group. This study can provide benefits for students for learning, for relevant agencies Can provide information, knowledge and insight to health agencies, especially Midwifery students and for health workers and other researchers.

Keywords: Progress of labor, peanut ball, gym ball

I. INTRODUCTION

The delivery process consists of 4 times I, which is the time of opening of the 1–10 cm cervix, II is the fetal delivery, III is the release and reproduction stage, IV is the first post-partum observation period [1].

The World Health Organization (WHO) [2] in 2011 estimates that 585,000 women die every day from pregnancy complications, unsafe births and abortions and an estimated one woman dies every minute. Countries in Asia including Indonesia have 20-60 times more women than Western countries in terms of maternal deaths and pregnancy complications. According to the SDKI 2012, an average of 1

2 maternal mortality (AKI) is reported to be 359 per 100 thousand live births. The death toll was significantly higher than the 2007 SDKI results of 228 per 100 thousand. In this regard, the fact that this death is a shameful government has previously determined that it would reduce the AKI to 108 per 100 thousand in 2015 in line with the MDGs' target [3].

Maternal mortality in Palembang City 2014, according to a report of 12 people out of 29,235 live births (Profile of Basic Health Services, 2015). The causes were bleeding (41.7%), followed by pulmonary embolism (1 case), cardiogenic shock suspect (1 case), eclampsia (1 case), suspectTB (1 case), hypertension in pregnancy (1 case), and more. As of 2015, 102 / 100,000 live births [4].

According to [3] Lengthening Period I is the time it takes to get my baby started from regular uterine contractions until the cervix is fully open. In primigravida I lasted 13 hours, whereas in multipara

Birth ball is a physical ballet that helps my mother in the first place to help with her baby's progress. A physical ballet that helps with the progress of the dressing can be used in a variety of positions. One of these movements is to sit on the ball and wiggle to create comfort and assist in the progression of exercise using gravity while increasing the release of endorphins due to elasticity and curvature of the ball stimulating the pelvic receptors responsible for endorphin secretion [5]. When a woman is giving birth free from fear, her body muscles, including the uterine muscles, experience relaxation that makes the birth process easier and stress-free [6].

The Peanut Ball: A Remarkable Labor Support Tool notes that there are many advantages that can be used with peanut balls such as Side-Lying. This position will help birthways open and also provide comfort to the mother on the bed [5].

II. RESEARCH METHODOLOGY

The design of this study is a quasi-experimental study, which is a design that attempts to reveal causal relationships by involving groups without intervention as well as groups with intervention as a comparison. The selection of both groups uses a group of subjects that have been established from the beginning who have similar behavioral characteristics [7]. This study was divided into two intervention groups. One intervention group was given Peanut Ball

technique treatment, while one control group was given gym ball technique treatment. The intervention was performed after the initial data was known [8].

The population of this study was 30 people with purposive sampling technique obtained a sample of 30 people. Peanut ball control group is 15 and gym ball control group is 15.

Indicators of measurement of dressing progress in the count of hours in which the time spent during the dressing process spontaneously starts from the time 1 patient arrives until complete opening. The data collected is the primary data obtained directly from the field research using the Observation Sheet and Partograph instruments.

The tools used in this research are 2 different balls namely, peanut ball which is a bean shaped ball that can be used in bed And Gym ball is a round ball that can be applied to sit.

III. RESULTS

Table 1. Overview of Research Respondents at BPM Palembang City

No.	Group	Amount
1	Group (Peanut Ball)	15 Subjects
2	Group (Gym Ball)	15 Subjects
Amount		30 Subjects

Based on table 1 above can be explained that in the treatment group and BPM kontrol in Palembang as many as 15 people.

Table 2. Distribution of Resondent Frequencies by age at BPM Palembang City

Age	F	Percentage
21-30 year	16	53,3 %
31-40 year	14	46,6 %
amount	30	100 %

Based on Table 2 it can be seen that the average proportion of respondents is between 20-30 years old.

Table 3. Frequency distribution of respondents by occupation in BPM Palembang City

Occupation	F	Percentage
work	4	13,3 %
Does not work	26	86,6 %
amount	30	100 %

ws that 86.6% of respondents did not work.

Table 4. Characteristics of respondents by occupation in BPM Kota Palembang

Test of Normality	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Age	.140	30	.137	.942	30	.104
Duration of Labor	.162	30	.042	.946	30	.136

a. Lilliefors Significance Correction

Based on the results of the test of normality in table 4 above, the respondent's characteristic data has a score > 0.05 which

means the data is normally distributed, then the statistical test used is the unpaired t-test (parametric test). However, if the data does not meet the requirements, an alternative test is used, namely the Mann-Whitney test (non-parametric test).

Table 5. Distribution of Respondents by Treatment using peanut ball and gymball with Progress in Delivery

	n	mean ± s.b	Diference of mean (IK 95%)	P
Peanut ball	15	3.00 ± 1.414	(-2.615) – (-0.585)	0.003
Gym ball	15	4.60 ± 1.298		

Based on Table 5 the analysis results that the average length of delivery in the treatment group was 3.00. Whereas in the control group with an average delivery rate of 4.60. Value of p value = 0.003 which means that there are significant differences in the control group and the treatment group

IV. DISCUSSION

Based on univariate research results, it is seen that the frequency distribution of respondent mothers using 15 treatments (100%) and the control group of mothers 15 people (100%).

From table 5.4 the analysis results show that the average delivery time in the treatment group is 3.00. Whereas in the control group with an average delivery rate of 4.60. Value of p value = 0.003 which means that there are significant differences in the control group and the treatment group.

The results of this study indicate if the value of p value = 0.003 then based on the independent t-test $p < 0.05$ which means that there is a difference in effectiveness between the use of ball and gymball followers on the progress of labor in multigravida delivery mothers.

A birth ball is a physical therapy ball that helps first-time mothers in a position that helps with the progress of labor. A physical therapy that helps with labor and can be used in various positions.

The Peanut Ball: A Remarkable Labor Support Tool writes that many different positions can be used with peanut balls like Side-Lying. This position will help open the birth canal and also provide comfort to the mother on the bed (Grant, and Lynn) [5].

And supported by research conducted by Renaningtyas, et al (2013) proves that pelvic rocking with birthing ball is able to expedite the delivery process, especially in the first time and help mothers experience normal first time labor. And also supported by [5] peanut Ball will help the birth canal open and also provide comfort to the mother on the bed

Based on the description above, the researchers can conclude that based on the results of the research team in the field, the treatment group showed more effective than the control group on the improvement of labor progress in multigravida mothers in the first time in BPM Palembang City with a difference of 1 hour faster than the control group.

V. CONCLUSION

Based on the results of research that has been done, it can be concluded as follows:

1. There is a difference in effectiveness between the use of peanut ball and gymball on the progress of labor in multigravida.
2. the treatment group (Peanut Ball) showed more effectiveness compared to the control group (Gym Ball) to increase the progress of labor in multigravida mothers in the first stage in BPM Palembang with an average difference of 1 hour faster than the control group

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